



# Michigan ByProduct Synergy

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Tri-County Regional  
Planning Commission

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# Tri-County Regional Planning Commission –Est. 1956

- Lansing
- Clinton, Eaton, and Ingham Counties
- Pop. 450,000
- Programming
  - Transportation
  - Economic Development
  - Data
  - Environment
  - Land Use



# Christine V. Spitzley, AICP

- B.S. Urban and Regional Planning
- 25 years
  - Economic Development
  - Transportation
  - Land Use
  - Air Quality
  - Fair Housing
  - Water

# ByProduct Synergy

- Take what is traditionally considered “waste” and repurpose it as an input.
- Reduce disposal costs
- Reduce raw material costs
- Protect the environment
- Save natural resources
- Save money, increase financial viability

# EHarmony

- ◉ Market to entities with wants/needs
- ◉ Provide a forum for exchange of information  
(Create a profile. Change at will.)
- ◉ Allow for private development of relationships  
(Go on as many dates as you wish)
- ◉ Legal concerns are between involved entities  
(Marriage)
- ◉ Dissolution of relationships also private  
(Divorce)

# Our Vision of a Successful BPS

- Participants will represent diverse entities
- Will be accessible to businesses, nonprofits and communities
- Will be sustainable

How does this work?

TCRPC

Participants

Stakeholders

Thinkers

# Participants:Stakeholders:Thinkers

- Participants bring a waste stream to the table or are looking for inputs.
- Stakeholders provide expertise, support, marketing, etc.
- Thinkers look at new ways to use, change, repurpose





So....

How is ByProduct Synergy  
different from the traditional  
“Waste Exchange Program” ?

# ByProduct Synergy

- “Old School” Waste Exchange
- *Transformation* of waste to new input or product
- Social Applications
- Environmental Metrics
- Sustainability

# “Old School” Waste Exchange

- Still has value
  - Experienced participants
  - Wisdom from successes and challenges
  - Case studies

# Transformation of Waste

- Thinking about waste in new ways
- Expert “think tanks” to consider alternatives
- Redefine “reuse”
  - Ex. Tires

# Social Applications

- ◉ Goodwill/Peckham:
  - ◉ Jobs
  - ◉ Training
  - ◉ Goods
- ◉ Environmental Justice
  - ◉ Landfill space
  - ◉ Raw materials
  - ◉ Pollution

# Environmental Metrics to Quantify Benefits Realized

- Landfill Diversion
- CO2 Reduction
- Energy Savings
- Hazardous Waste Reduction
- Water Use Reduction
- Reduction in Virgin Material Use

# Sustainability

- Low cost
- Diverse
- Evolving
- Open forum
- Dissemination

# Success Story - Chicago

## ORGANIZATIONS INVOLVED

- Cloverhill Bakery
- Smurfit Stone Recycling

## WASTE INVOLVED

- Mixed plastic and paper packaging



## ACHIEVEMENTS

- 2000 tons of high value packaging waste to be diverted from landfill annually with a savings of roughly \$4M
- \$10,000 investment in new equipment
- Created a profitable community recycling center which benefits all contributing companies and spreads the values of sustainability
- Closed loop life cycle for previously non-recyclable plastics and fiber products
- CO2 savings from diverting plastic from landfill and proximity aggregation of recyclables



# Success Story -Chicago

## ORGANIZATIONS INVOLVED

- Abbott Laboratories
- ArcelorMittal Steel

## WASTE INVOLVED

- Sodium hypochlorite (industrial bleach)

## ACHIEVEMENTS

- 20K tons of industrial bleach was diverted from the public sewer system and used to create cleaner process water for AcelorMittal Steel
- Taxpayer savings from reduced water treatment
- Transformed a hazardous waste into a beneficial reuse byproduct
- CO2 savings from local sourcing of raw materials
- Created greater inter-company communications and efficiencies regarding water treatment



# Success Story - Chicago

## WASTE INVOLVED

- Glass cullet

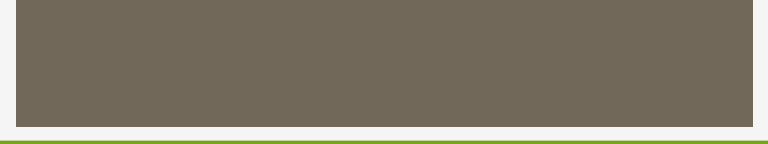
## ORGANIZATIONS INVOLVED

- Engineered Glass Products
- Gilasi/Innerglow Surfaces

## ACHIEVEMENTS

- 900 tons of glass cullet diverted from landfill annually
- Drives green building materials development and competitiveness
- CO2 diverted through low energy recycling into new material
- Potential for jobs to be created as business grows
- Closed loop life cycle for previously non-recyclable glass



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- Chicago's Museum of Science and Industry chose Moroccan Sand Gilasi\*Ca kitchen countertops for its [2010 Smart Home Exhibit](#).
  - Three distinct Gilasi product lines:

[Gilasi\\*Chi](#): for a clean, monochromatic look.

[Gilasi\\*Ca](#): with sparkling cubes of former oven window door glass.

[Gilasi\\*Go](#): bold colors reclaimed from broken light fixture glass.

- Beautiful and environmentally friendly, Gilasi countertops are made in Chicago using 85% recycled content by weight with 100% recycled glass. Gilasi combines locally sourced green materials with high-end style.
- Gilasi countertops and surfaces boost [US Green Building Council](#) LEED points to your project.

(Information from Gilasi homepage [www.gilasi.com](http://www.gilasi.com) )

# Statewide Interest/Support

- Flint Area Reinvestment Office
- Suppliers Partnership for the Environment
- MDEQ—Lansing, Grand Rapids, Detroit

# Sample of Those Interested in “Next Steps”

- ◉ GMB Communities
- ◉ Working Bugs
- ◉ Demmer
- ◉ LBWL
- ◉ Ford
- ◉ Chrysler
- ◉ Proctor and Gamble
- ◉ Dow
- ◉ Goodwill
- ◉ GM
- ◉ Goodyear
- ◉ The Polar Companies
- ◉ CMS Energy
- ◉ Gage Products
- ◉ Aevitas
- ◉ Mott Foundation
- ◉ Detroit Dirt



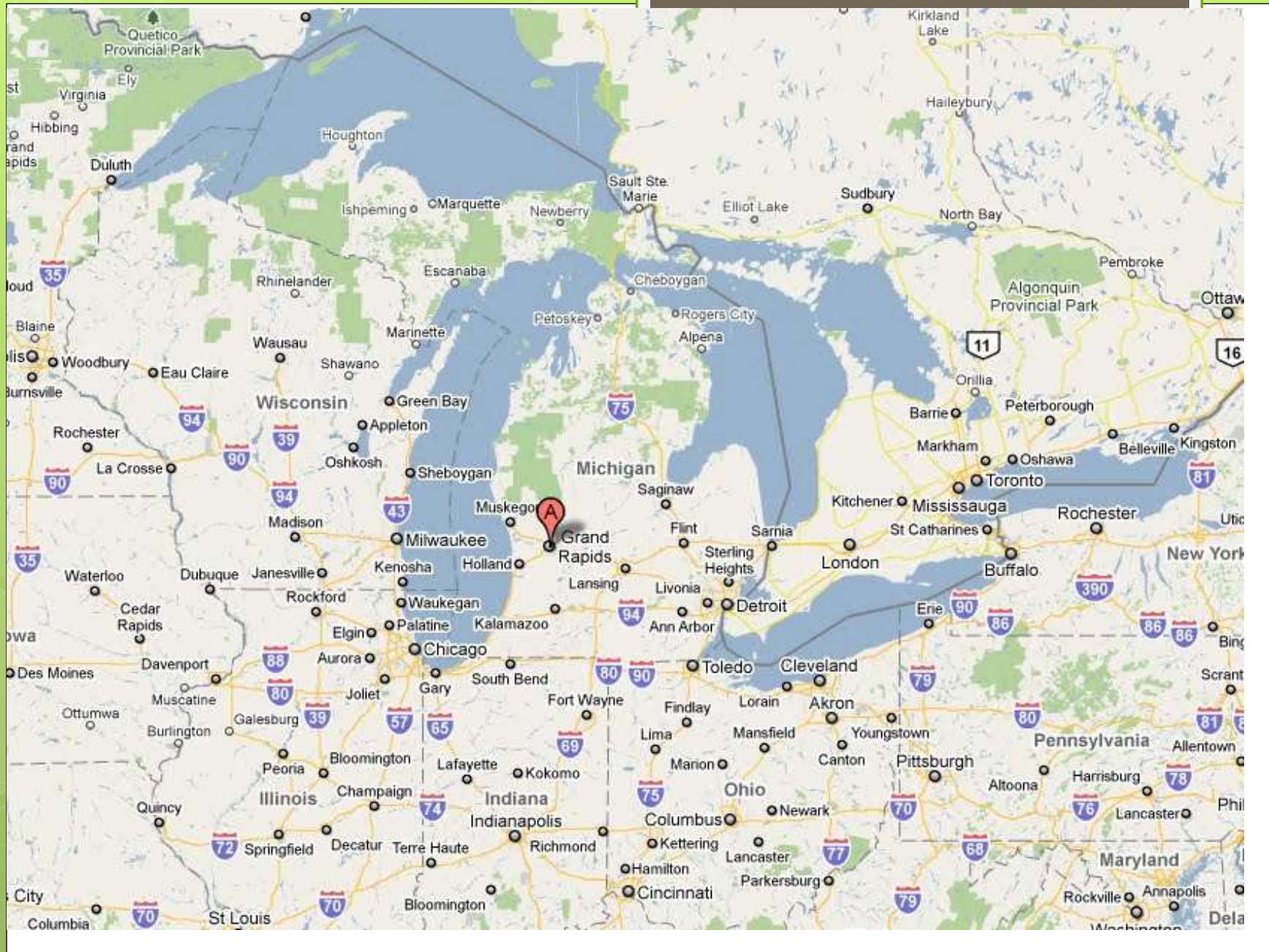
# Transportation Network



# Mid-West BPS Projects







# Impetus for TCRPC's Involvement

- Graciously defined as an:  
*“Unexpected Opportunity”*
- TCRPC seen as logical entity.
- Creating networks of sustainable programs is what we do.

# Impetus for TCRPC's Involvement

- TCRPC's Groundwater Management Board's (GMB) goal is to protect water.
- Identified support of businesses and other local entities in becoming more "green" as a means to achieve this goal
- Recognized:
  - It needed to be financially viable
  - Driven by users
  - Sustainable

# Michigan ByProduct Synergy

- February 2012
- 3 year grant \$60,000 from EPA via MDEQ
- 50% match GMB
- Goal to create a Michigan BPS Network

# New BPS Funding for 2013

- \$20K Wellhead Protection Grant –  
Delta Charter Township
- \$35K Wellhead Protection Grant –  
Lansing Board Water and Light
- Both will focus on working with businesses to provide them resources to improve their practices and reduce their risk to water resources.

# MDEQ Please Meet MDEQ

- Two completely different programs
- Supporting same end goal
- Leveraging program dollars and resources


# Ultimate BPS Goals

- Create Michigan BPS database
- Continually review potential synergies between participants in Michigan
- Continue to grow and shape BPS
- Disseminate process and outcomes

# Challenges

- ◉ Shaping the framework without starting from scratch
- ◉ Legal
- ◉ Promotions and Marketing
- ◉ Dissemination





Thank you  
for your  
consideration.  
Questions?

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